C-A OPERATIONS PROCEDURES MANUAL

3.24   Procedures to be Implemented for Facility Fire Alarm System Problems

Text Pages 2 through 5

Attachments

<u>Hand Processed Changes</u>

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Approved: _____***Signature on File***_____ _____
Collider-Accelerator Department Chairman   Date

R. Karol

3.24 Procedures to be Implemented for Facility Fire Alarm System Problems

1.   **Purpose**

This procedure specifies actions to be taken by C-A personnel during operating or shutdown periods when problems arise with the fire alarm system. The two issues addressed are:

1.1   Site Fire Alarm Failure

Very infrequently the computer system that connects the building fire alarms to the Fire/Rescue (F/R) Group (Building 599), fails. This prevents fire alarms from being transmitted to F/R so they can respond. If this occurs, F/R will transmit this information to all Building Managers via e-mail, and to C-A Management via beepers. Actions to be implemented if this occurs are addressed.

1.2   False Building Fire Alarms

If a false alarm occurs, the F/R Group ensures that it was false and resets the alarms. If the alarm cannot be reset, the MCR Coordinator (during operations), or ESH Coordinator (during shutdown periods), shall only allow bypassing of the alarm under the conditions specified in this procedure.

2.   **Responsibilities**

2.1   The OC is responsible for implementing this procedure while the MCR is manned.

2.2   The CAS Watch is responsible for implementing this procedure when the MCR is unmanned, and the CAS Watch is stationed.

2.3   If the MCR is unmanned, and the CAS watch is not stationed, the ESH Coordinator is responsible for implementing this procedure upon notification of the problem.

3.   **Prerequisites**

None

4.   **Precautions**

4.1   The Operational Safety Limits in C-A OPM's 2.5, 2.5.1 and 2.5.2 shall be reviewed, to assure that OSL's related to the accelerators and experiments are satisfied.

5. **Procedures**

    5.1   Site Fire Alarm Failure

Very infrequently the computer system that connects the building fire alarms to the Fire/Rescue (F/R) Group (Building 599), fails. This prevents fire alarms from being transmitted to F/R so they can respond. If this occurs, F/R will transmit information about the fire alarm system failure to all Building Managers via e-mail, and to C-A Management via beepers or phone. When the site fire alarm system fails, F/R makes scheduled tours of the BNL site as specified by the Fire Captain. Upon receipt of this failure, the following actions shall be taken:

a) When neither the MCR nor the CAS Watch are manned, ESHQ Division shall ensure that the C-A personnel are aware of this condition by sending an e-mail to C-A personnel (see section (d) below), and informing C-A Management. They shall also contact other manned C-A Control Rooms to inform them of the problem, and the required response to a building fire alarm, as specified in (d) below. The ESH Coordinator, or designee, shall provide the F/R Group information on the status of the C-A complex, and discuss the areas where F/R should focus their tours while the site fire alarm system is out of service. Consider manning the CAS Watch to take the actions specified in (e) below.

b) If the MCR is manned, MCR shall take the actions specified in (a) above.

c) If the MCR is unmanned, and the CAS Watch is manned, the CAS Watch shall take the actions specified in (a) above.

d) Information below shall be transmitted by personnel as specified (a), (b) or (c) above:

If a fire alarm system activates in your building, have a person assigned to call the firehouse (911 or extension), and verify that the Fire/Rescue Group is aware of the alarm. As a suggestion, the person should be one that is normally in the facility, such as a receptionist, secretary, or facility manager. When a fire alarm goes off, call 2222 and say: "The fire alarm bells are ringing in Building XXX and I have no further information."

e) If manned, CAS Watch shall tour the C-A complex at least every 2 hours to determine conditions in remote buildings.

f) When the site fire alarm system is restored, this information shall be transmitted to C-A personnel in the same manner as described above.

5.2   False Building Fire Alarms

If a false alarm occurs, the F/R Group ensures that it was false and resets the alarms. If the alarm cannot be reset, the MCR Coordinator (when MCR is manned), or ESH Coordinator (during shutdown periods), shall only allow bypassing of the alarm under the following conditions:

a) The F/R Group has concluded that the alarm was false.

b) Repairs would take more than 2 hours to accomplish, and there is a valid reason not to wait for the repairs to be completed (e.g., experimental program delay or work delay).

c) The BNL Fire Protection Engineer (or F/R Group Captain), and the Associate Chair for ESHQ, ESHQ Division Head, or ESH Coordinator, agree with the bypass, considering the following in the decision process:

1. The requirements of the C-A Complex OSL's (OPM 2.5, 2.5.1, and 2.5.2)
2. The risk of equipment loss along with the programmatic impact of not allowing the bypass.
3. Compensatory actions shall be developed, which may include additional remote monitoring of the equipment in the area where the alarm is bypassed, increased walk-through of the affected area (if possible), etc.
4. Consider de-energizing equipment in the affected area, and/or prohibiting personnel into the area, while the alarm is bypassed.

d) As soon as practical, the bypassed alarm shall be restored to service. If entry to an area under control of the Access Controls System or the Particle Accelerator Safety System is required for repair, the C-A Maintenance Coordinator shall coordinate with BNL Plant Engineering regarding the earliest time to complete repairs. In all other areas, the Building Manager of the affected building shall coordinate the repair with Plant Engineering.

6.   **Documentation**

None

7.   **References**

7.1   C-A-OPM 2.5, Operational Safety Limits/Accelerator Safety Envelope For AGS, Booster and Linac.

7.2   C-A-OPM 2.5.1, Operational Safety Limits for C-A Tandem Van de Graaff.

7.3   C-A-OPM 2.5.2, RHIC Accelerator Safety Envelope Parameters.

7.4   SBMS ESH Standard 2.4.0.

8.   **Attachments**

None